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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,487	04/12/2004	Peter Oosterhoff	P0011071.01	3020

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MEDTRONIC, INC.
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EXAMINER

HELLER, TAMMIE K

ART UNIT	PAPER NUMBER
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3766

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04/29/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/822,487	Applicant(s) OOSTERHOFF ET AL.	
	Examiner TAMMIE HELLER	Art Unit 3766	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 32-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 32-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed on January 31, 2008 has been received and considered. By this amendment, no claims have been amended, and claims 32-59 are now pending in the application.

Response to Arguments

2. Applicant's arguments, see section I, pages 1-2, filed January 31, 2008, with respect to the rejection of the claims under 35 USC 112, first paragraph, have been fully considered and are persuasive. The rejection of the claims as failing to comply with the written description requirement has been withdrawn.

3. Applicant's arguments filed January 31, 2008 have been fully considered but they are not persuasive. Based on Applicant's arguments presented regarding the rejection of the claims under 35 USC 112, first paragraph, the Examiner considers Applicant's disclosure and subsequent arguments to indicate that autonomous intrinsic activity is equivalent to intrinsic activity. Throughout Applicant's disclosure, the phrase "intrinsic activity" is utilized, according to the Applicant's newly presented arguments, to represent "autonomous intrinsic activity." Therefore, within the prior art, the Examiner considers any disclosure of "intrinsic activity" to represent a disclosure of "autonomous intrinsic activity", as the Applicant has disclosed it as such.

4. Regarding the rejection of the claims as being anticipated separately by Park and Van Dam, the Applicant argues that the remarks presented in paragraphs 3 and 4 of the Non-Final Office Action of November 27, 2007 indicate an acknowledgement of the fact that Park does not teach, suggest, or imply "detecting whether an autonomous intrinsic

signal component is present.” The Examiner respectfully disagrees with this contention. At paragraphs 3 and 4 of the previous Office Action, the Examiner indicates that because the Applicant has not differentiated “autonomous intrinsic activity” from “intrinsic activity” within the Specification, then Park is considered to still anticipate the claimed subject matter. As discussed above, the Applicant has newly presented arguments in response to the rejection of the claims under 35 USC 112, first paragraph, that indicate that “autonomous intrinsic activity” and “intrinsic activity” are phrases used synonymously. The Applicant has presented no arguments as to why Park does not disclose intrinsic activity. Therefore, the rejection of the claims as being anticipated by Park is considered to be proper.

5. Regarding the rejection of the claims as being anticipated by Van Dam, the Applicant argues that there is no teaching in Van Dam for making a determination of whether or not there is an autonomous intrinsic component within a sensed signal. As discussed earlier, the phrase “autonomous intrinsic activity” is considered to be synonymous with “intrinsic activity.” The Applicant argues that Van Dam discloses at col. 11, lines 21-26 the correct characterization of Figure 8. However, col. 11, lines 21-26 actually are directed at Figure 6, rather than Figure 8. The Applicant appears to have ignored the Examiner’s arguments presented in paragraph 4 of the Office Action of November 27, 2007, which indicate that the description of Figure 8, as disclosed at col. 3, ln. 58-60, indicates that the steps taken within the flow diagram of Figure 8 are utilized in order to detect intrinsic activity within a detected signal. Therefore, Van Dam

in fact discloses detecting "autonomous intrinsic activity", as "intrinsic activity" is considered to be synonymous.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 32-35, 41-44, and 51-54 are rejected under 35 U.S.C. 102(e) as being anticipated by Park. Regarding claims 32, 41, 44, and 51, Park discloses a device which delivers a pacing pulse to a heart, detects intrinsic activity within the heart, and extends a pacing interval between pacing pulses based on detecting intrinsic ventricular activity (see paragraphs 22 and 24). Further, Park discloses at paragraph 29 that the device 410 is utilized to carry out the disclosed methods, and at paragraph 60, Park discloses that the coronary sinus lead 424 is used to sense activity of the ventricle and pace the ventricle. Therefore, by utilizing the device 410 to carry out the method disclosed in paragraphs 22 and 24, Park discloses delivering a ventricular pacing pulse to a heart, sensing a ventricular signal resulting from the delivered pacing pulse, detecting intrinsic activity within the sensed ventricular signal within the heart after delivering the pacing pulse, and extending a pacing interval between the delivered

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ventricular pacing pulse and a subsequently delivered ventricular pacing pulse based on the detection of intrinsic ventricular activity.

8. Regarding claims 33, 42, and 52, it is inherent that when the device of Park extends the pacing interval between pacing pulses, thus increasing the amount of time between pulses, the detection of intrinsic activity is aided. If there is a longer period of time during which there is no pacing pulse, the possibility of detecting intrinsic activity is enhanced.

9. Regarding claims 34, 43, and 53, Park discloses that modifying the pacing interval includes modulating an atrial to ventricular pacing delay (see paragraph 70, In. 1-3).

10. Regarding claims 35 and 54, it is inherent that the subsequently delivered pacing pulse of Park may be delivered to a ventricle of the heart after the delivered pacing pulse (see paragraph 61, In. 1-3).

11. Claims 32, 33, 35-42, 44-52, and 54-59 are rejected under 35 U.S.C. 102(e) as being anticipated by Van Dam. Regarding claims 32, 41, 44, and 51, Van Dam discloses ventricular pacing electrodes 28 and 29 at the distal end of ventricular pacing lead 18 which are capable of delivering a pacing pulse to a ventricle of the heart (see col. 4, In. 19-21), detects intrinsic ventricular activity (see col. 11, In. 21-22 and col. 3, In. 58-60), and extends a pacing interval between pacing pulses based on the detection of intrinsic ventricular activity (see col. 1, In. 7-11). Attention is directed to Figure 6 where at decision block 200 it is determined whether an intrinsic Vevent occurred or a paced

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Vevent. When it is determined that a paced Vevent occurred, the flow progresses to block 215 where intrinsic ventricular activity is detected and further to block 210 where the pacing interval is extended based on the detection of intrinsic ventricular activity (see Figures 6 and 8 and col. 3, ln. 58-60).

12. Regarding claims 33, 42, 52, it is inherent that when the device of Van Dam extends the pacing interval between pacing pulses, thus increasing the amount of time between pulses, the detection of intrinsic ventricular activity is aided. If there is a longer period of time during which there is no pacing pulse, the possibility of detecting intrinsic ventricular activity is enhanced.

13. Regarding claims 35 and 54, it is inherent that the subsequently delivered pacing pulse of Van Dam may be delivered to a ventricle of the heart after the delivered pacing pulse (see col. 4, ln. 19-21).

14. Regarding claims 36, 45, and 55, Van Dam discloses that in order to detect intrinsic ventricular activity within the heart, a past ventricular signal is compared with the current ventricular signal (see col. 1, ln. 56-59).

15. Regarding claims 37, 46, and 56, the Examiner takes the position that it is inherent that the device of Van Dam utilizes a past ventricular signal where the heart is fully captured by the past pacing pulse. It is necessary for a pacing pulse to fully capture the heart in order to evoke a cardiac response that generates the QT interval of Van Dam.

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16. Regarding claims 38, 47, and 57, Van Dam discloses that a past ventricular signal may be a most recent ventricular signal resulting from a most recent pacing pulse (see col. 11, ln. 37-41).

17. Regarding claims 39, 48, and 58, Van Dam discloses comparing at least one morphological characteristic of a past ventricular signal to the same morphological characteristic of the current ventricular signal (see col. 3, ln. 9-11).

18. Regarding claims 40, 49, and 59, Van Dam discloses that a morphological characteristic that may be used is a T-wave amplitude or T wave slope (see col. 3, ln. 9-11).

19. Regarding claim 50, Van Dam discloses memory 59 which may be used to store the past ventricular signal (see Figure 5).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Conclusion

20. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAMMIE HELLER whose telephone number is (571)272-1986. The examiner can normally be reached on Monday through Friday from 7am until 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl H. Layno can be reached on 571-272-4949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Tammie Heller/
Examiner, Art Unit 3766

/Carl H. Layno/
Supervisory Patent Examiner, Art Unit 3766